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The Partners

Fondation pour la Recherche sur la Biodiversité, FRANCE, Coordinator

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Natural Environment Research Council, UNITED KINGDOM

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Editorial

In November 2013, BiodivERsA launched its 5th joint call for proposals, this time in partnership with the FACCE-JPI (Joint Programming initiative). This joint call promises to be a real success, as 14 countries participated to the call and will attempt to fund biodiversity research projects for a total amount close to 10 million euro. This joint call turns out to be a very positive approach both for BiodivERsA and FACCE-JPI, as it allows to attract more countries than in the previous calls, while giving more visibility to the call.

As this call is the last one that will be launched during the second phase of the BiodivERsA project, it is time to review the results of BiodivERsA achieved so far. Since the beginning of BiodivERsA, five joint calls have been launched for a total amount of 100 million euro (including 50M€ of new money raised by BiodivERsA partners)(Fig. 1).

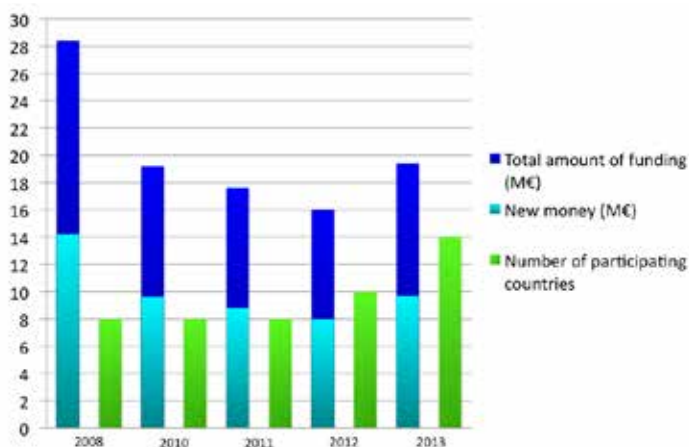


Figure 1: Amount of funding and number of countries participating for the 5 calls already launched by BiodivERsA since 2008

These joint calls have contributed to the funding of research projects of high scientific quality. For instance, two-thirds of the BiodivERsA projects funded through the first call have already published in the high profile scientific journals Nature, Science or PNAS! These five calls also contributed to address different pressing scientific and societal issues, from valuation of biodiversity and ecosystem services to biological invasions or synergies between biodiversity and agriculture. While selecting the projects that have to be of excellent scientific quality, great attention has also been paid to their policy relevance and to the active engagement of key stakeholders. In fact, 75% of BiodivERsA projects

actively engage stakeholders, contributing to promote the science-society interface, which is at the heart of BiodivERsA's objectives. Moreover, projects' results consisted in part in products useful for policy makers and relevant stakeholders such as adequate maps, useable scenarios, management plans, or guidelines, which contributed to transform research results into concrete tools and actions in response to societal challenges. BiodivERsA's records show that the same projects can reach scientific excellence while adequately engaging stakeholders and delivering policy- and society-relevant products.

To further disseminate and promote the use of such outputs, BiodivERsA has engaged in professional knowledge brokerage activities in collaboration with IUCN Europe, and notably produced policy briefs based on its funded-projects' findings. BiodivERsA also implemented mapping exercises on the research landscape in Europe. The creation of the BiodivERsA database was part of this mapping strategy. It provides information for over 6500 research projects on biodiversity funded in Europe and available funding opportunities and programmes. It was supplemented with an analysis of the existing biodiversity research infrastructures in Europe and the ways to overcome barriers for shared access.

Since its creation, the BiodivERsA ERA-net has had a significant impact on the biodiversity research programming, funding and impact. Although the second phase of BiodivERsA is coming to an end in late 2014, the current partners are highly committed to pursuing their participation in the network and its activities, in the context of Horizon 2020. Beyond these renewed partnerships, BiodivERsA is now seeking to expand its network and hopes to include even more countries, with a meeting planned with new partners in February 2014. BiodivERsA also aims at launching some calls of even higher amplitude in the future, while exploring other activities such as alignment of some national programmes. This will contribute to the enhanced capacity of BiodivERsA to coordinate national research programmes on biodiversity.

Xavier Le Roux
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2013 - 2014 Call on “Promoting synergies and reducing trade-offs between food supply, biodiversity and ecosystem services”

BiodivERsA and FACCE-JPI are pleased to announce that the 2013-2014 joint call on « Promoting synergies and reducing trade-offs between food supply, biodiversity and ecosystem services » has been launched on 1st November 2013.

For this joint call, **14 countries have confirmed their participation**, namely Austria, Bulgaria, Cyprus, France, Germany, Lithuania, The Netherlands, Norway, Portugal, Romania, Spain, Sweden, Switzerland and Turkey. **The total provisional amount of the call is close to 10 M€.**

Scientific teams from these countries were invited to form transnational research consortia with a total of at least 3 different countries participating in the call, and to submit proposals before the **14th of February 2014**. A mandatory pre-registration of the projects (title, summary, consortium and preliminary budget figures) was required by the **16th of December 2013**.

The call addresses the two following, non-exclusive themes:

1. To what extent can biodiversity better support agro-ecosystems / agricultural production systems in terms of multi-functionality and outcomes in a global change context?

2. Which policies and governance systems can promote the emergence and support of agro-ecosystems / agricultural production systems benefiting from and beneficial to biodiversity and ecosystem services?

The quality of submitted research proposals will be evaluated across **criteria of scientific excellence** but also of **policy relevance**. It is also expected that the European scope of the projects will provide a clearly identified added value to the research carried out.

The budget available by each participating agency/ country is available online at www.biodiversa.org and www.facejpi.com, as well as a FAQ, a partner search tool and an indicative applicant form. An Electronic Proposal Submission System (EPSS) for the pre-registration is also available and it will be updated for the full application submission at a later stage.

As applicants are required to fulfil the national eligibility rules of their respective countries, they are invited to consult the relevant documents, and to contact their National Contact Point for more information.



For a full description of the call for proposals, please refer to the BiodivERsA (www.biodiversa.org) and FACCE (www.facejpi.com) websites. Information on national contact points can also be found here.

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BiodivERsA 2012- 2013 Call: Summaries of the funded projects

Nine research projects have been selected for funding under the BiodivERsA 2012-2013 joint call on “Invasive species and biological invasions” for a total amount close to 8 million euro among 10 participating countries. Below, we briefly present the projects’ aims and ambitions. Additional information on these projects can be found on our website (<http://www.biodiversa.org/367>)

DIARS - Detection of Invasive plant species and Assessment of their impact on ecosystem properties through Remote Sensing

The DIARS project, coordinated by Belgium, involves teams from Belgium, France and Germany. The project aims to use a remote sensing approach to address the problem of lacking spatial and temporal data on the occurrence and spread of invasive species, and on their ecosystem impacts. The study will focus on three invasive species (*i.e. Campylopus introflexus, Oxalis pes-caprae, Prunus serotina*) classified among the worst plant invaders. As such, this project should contribute to the characterisation of the ecosystem impact of invasive plant species, and to the monitoring and risk assessment of such species. The outputs of the research could then be used for management and mitigation measures.

EXOTIC - EXperimentally Orientated genomics to Tackle Insects adaptive Challenges during bio invasions: the ladybird *Harmonia axyridis* as a model species

Coordinated in France, the EXOTIC project brings together teams from France, Belgium and Germany. Working on evolutionary adaptation, the project will analyse how alien species cope with a new environment and how they develop the characteristics of invasive species. The research is based on the case of *Harmonia axyridis* (HA), a ladybird species from Asia that has been introduced in North America and Europe as a biocontrol agent against aphids. It seems that the species has now evolved into three populations (native, invasive and biocontrol) each with different characteristics. The project aims to decipher the adaptive changes that have taken place during HA invasion by means of genome-wide comparisons of native, biocontrol and invasive populations. This line of research could also be extended to other species of agro-economic interest. The results of this project should contribute to the identification of biocontrol agents that are not destined to

become invaders, and to the development of effective management strategies.

FFII - Forecasting Future Invasions and their Impacts

This project, coordinated in Sweden, involves teams from France, Sweden and Germany. It aims at better forecasting of future invasions of alien species and their impact worldwide. It will first focus on the effect of global changes (climate and land use) on biological invasions worldwide. Then, it will concentrate on the case of *Formicidae* (ants), as they count a high number of invasive species. The project should contribute to setting up an innovative control method for invasive ants, allowing a more efficient early response against invasions and addressing impacts in economics, agriculture, forestry, aquaculture, human health and health of other organisms.

GC-INVAMOFECT - Global change and invasive mosquitoes as infectious disease risks in Europe

Bringing together teams from Austria, Germany and France (which is the coordinator), this project, embedded in the context of climate change, will focus on genomic, microbiological, parasitological, and ecological bases of invasiveness and adaptive capacities of mosquito species in novel environments. By predicting spatial and temporal distribution of native and invasive mosquito species, research results will allow improved risk assessments and a better management of introduced and native mosquito-borne diseases in Europe. In addition, laying the hypothesis that climate change has a major impact on the spread of invasive species of mosquitoes and pathogens in Central Europe, the project intends to use these organisms as indicators for climate change in Europe.

INVAXEN - INVASive biology of *XENopus laevis* in Europe: ecology, impact and predictive models

This project, coordinated by France, involves research teams from Belgium, France, Germany and Portugal. It aims to investigate the future distribution of *Xenopus laevis*, one of the world's most widely distributed amphibians with invasive populations. The project will provide scenarios for the potential future spread of this invasive species in Europe under different climate change conditions. Through its integrative nature and pan-European dimension, the approach could serve as a model for the study of invasive vertebrate species. Finally, the consortium intends to further improve an eradication programme currently implemented in Portugal.

PROBIS - Heterogeneity of patterns and processes along biological invasion successions

This project, coordinated by France, involves teams from Germany, Sweden, France and Turkey. The project aims at a better understanding of biological invasions through the analysis at different stages of an invasion of crucial trait variations in a set of selected species. The study uses three model species (a beetle ladybird, a fish and a parasite - *Tracheliastes polycolpus*) that have clear ecological and socio-economic impacts on a range of ecosystems services. The project outcomes should help managers in prioritizing and anticipating actions limiting the spread of non-native species and their impacts on socio-economic sectors. This project should contribute to the identification of biocontrol agents that are not destined to become invaders, and to the development of effective management strategies.

RESIPATH – Responses of European Forests and Society to Invasive Pathogens

Led by Sweden, this project mobilizes a large consortium of Austrian, Belgian, Bulgarian, German, French, Norwegian, Portuguese, Swedish and Turkish research teams. The project aims to investigate the ways in which European forests are affected by, and respond to invasive pathogens. Through an analysis of the impact of invasive pathogens on several tree species, and also considering the tree species' adaptation

capacities to these pathogens, this project aims at developing systems for the early detection of invasive pathogens and increasing knowledge flows between researchers, specific stakeholders and the wider society.

SALMOINVADE – Causes and consequences of invasions of aquatic ecosystems by non-native salmonids

Coordinated by Sweden, this project brings together teams from France, Germany, Norway and Sweden. Bridging between competences in genetics, ecology, and environmental economics, and focusing on invasive salmonid species, the project will develop a strongly interdisciplinary approach. It will notably study how stakeholders perceive this biological invasion and provide well-informed, integrated recommendations for policy and management measures of salmonid invasions.

WHOISNEXT - Climate change and escaping ornamentals: Predicting the next generation of European plant invaders

Important future plant invaders will probably be recruited from ornamentals currently growing in our garden. That is the premise of the project led by Germany and mobilizing research teams from Austria, Germany and France. The project will focus on "sleeping invaders" that could spread in the future, especially as climate change might create suitable conditions for many of these ornamental plants. More specifically, an invasion-simulation model will be developed to assess which types of habitats and which regions will be most vulnerable to invasions. Results will be widely disseminated to all relevant stakeholders, such as the ornamental-plant industry, garden-plant retailers, horticultural societies and policy makers.



Launch of the BiodivERsA database (data.biodiversa.org)

One of the objectives of the BiodivERsA consortium is to produce a comprehensive 'map' of the current state of research on biodiversity and associated ecosystem services in Europe in terms of projects, programmes and funding, to improve the identification of existing gaps and future needs for new research programmes, new facilities, as well as detecting potential barriers for successful cooperation. This allowed BiodivERsA to analyse the funding landscape for biodiversity research in Europe (download the booklet from <http://www.biodiversa.org/8>). BiodivERsA also analysed the profile of funded research and the possible complementarities of biodiversity research priorities among countries and agencies in Europe (additional booklet to be published in 2014).

In this context, we are pleased to announce that **the BiodivERsA database is now accessible online (data.biodiversa.org)**, holding information about:

- funding programs and associated calls for research proposals on biodiversity and associated ecosystem services in Europe; this includes thematic programs devoted to biodiversity, thematic programs including biodiversity issues, and blue sky programs where biodiversity research applications are eligible; grants, fellowships and studentships are also referenced. Focus is on competitive funds only, excluding e.g. funding by national institutes of the part of the scientific community they are in charge of, or schemes that fund local research teams only
- research projects on biodiversity and associated ecosystem services funded through these programmes
- research institutes and other organisations (including stakeholders) involved in the projects funded, and researchers leading the projects

Upon registration and acceptance of the data user agreement, information in the database will be available to anyone interested in biodiversity research funding in Europe.

The BiodivERsA database presently includes 603 annual calls within 216 different funding programmes (including the biodiversity-relevant programmes of the European FP6 and FP7, and BiodivERsA ERA-net calls), 6508 research projects, 2834 research organisations, and 5903 persons. Those data span the 2000-2014 time window, and currently cover 17 countries: Austria, Belgium, Bulgaria, Estonia, France, Germany, Hungary, Ireland, Italy, Lithuania, the Netherlands, Norway, Portugal, Spain, Sweden, Turkey, and the UK.

This database will help scientists to identify potential resources and network opportunities to further develop their research. In addition, it will help at finding scientific expertise for specific policy questions. As such, the BiodivERsA database is a valuable tool for strategic cooperation and expertise in the large, fragmented domain of research on biodiversity and associated ecosystem services.

BiodivERsA at the European Parliament event «Meeting the EU 2020 Biodiversity Targets: Mainstreaming Conservation»

In the context of the conference of the European Parliament intergroup on 'Climate change, biodiversity & sustainable development', DG-RTD and IUCN organized an event including four round table debates (EU Parliament, Brussels; Tuesday 24th September).

The aim of this conference was to present and discuss the contributions of various actors (research project leaders, institutions, administrators, NGOs, businesses etc.) to the implementation of the EU Biodiversity Strategy 2020, and allowed experience and knowledge sharing between policy-makers and stakeholders.

BiodivERsA was represented at the event by Hilde Eggermont (BELSPO), Per Sjogren-Gulve (SEPA), Frédéric Lemaitre (BiodivERsA secretariat) and Xavier Le Roux (FRB). In his capacity of BiodivERsA coordinator, Xavier Le Roux participated to the roundtable «Linking biodiversity science to policy-making», and illustrated the role of BiodivERsA in promoting science-society and science-policy interfacing during the whole research process, from programme co-design and implementation, to research project selection, funded research activities and transfer of knowledge to stakeholders and policy makers. The event links up with BiodivERsA's work that aims to make biodiversity research more prominent in science policy agendas.



BiodivERsA Staff Exchanges in Sofia and Lisbon: exchange of experiences and best practices on European biodiversity research

(September 26-27, 2013 and October 17-18, 2013)

The organisation of staff exchanges contributes to achieving one of the main goals of the BiodivERsA project: promoting networking within the consortium and integrating new partners. More specifically, the staff exchanges allow participating partners to draw comparisons between their organisations and their respective ways of functioning. Partners also get the opportunity to discuss on a dedicated theme selected by the BiodivERsA consortium.

For these two staff exchanges, the partners were invited to share views, best practices and encountered difficulties on the two following themes:

- > Partnerships with industry and other organizations and;
- > Integration of young scientists in research projects

These two staff exchanges were organized with the support of the Bulgarian National Science Fund (BNSF), which is in charge of the organization of the staff exchanges within BiodivERsA.



The staff exchange in Sofia focused on Partnerships with industry and was hosted by BNSF. It was attended by representatives from BNSF, the Estonian Research Council (ETAG), the Spanish Ministry for Science and Innovation (MINECO), the Turkish Ministry of Food, Agriculture and Livestock (MFAL) and the BiodivERsA Secretariat. A visit was organized to the Dragoman Marsh Wetland Conservation Centre, which aims at the conservation and restoration of flora and fauna in natural ecosystems and at raising public awareness on the problems of nature conservation.

The staff exchange in Lisbon focused on the integration of young scientists and was hosted by the Portuguese Foundation for Science and Technologies (FCT). Representatives from FCT, ETAG, the German Research Foundation (DFG), BNSF, the Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) and the BiodivERsA Secretariat attended the meeting. During this staff exchange, the partners were invited by several Portuguese research centres. On this occasion, senior and young scientists, consultants and horticultural business managers presented their work and shared their experiences on participation in biodiversity-oriented projects and the involvement of early career researchers.

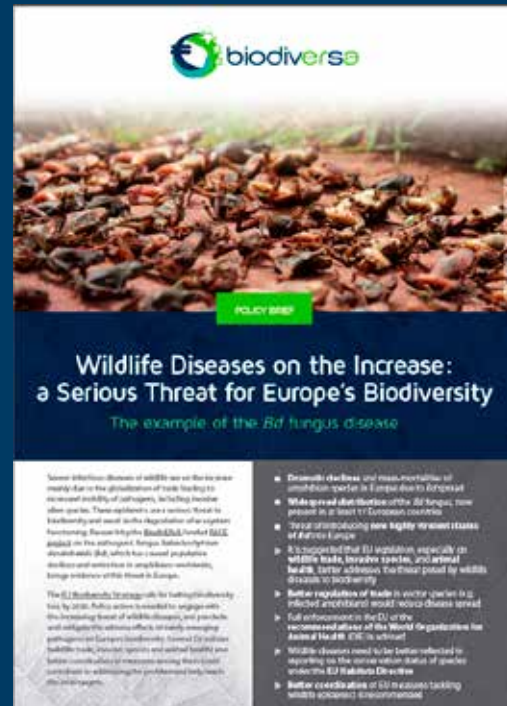


The meeting in Lisbon marked the end of the series of staff exchanges planned for in the current phase of the BiodivERsA project. Such meetings have provided a great opportunity for partners to get to know each other and to share experiences in a formal and informal context, allowing to build trust and understanding. Moreover, they are viewed as an effective mean to present the BiodivERsA ERA-net to new partners and to integrate them in the network's activities.

Publication of the first two BiodivERsA policy briefs

IUCN Europe has partnered up with BiodivERsA to help present the findings and recommendations of selected BiodivERsA projects into a first series of policy briefs targeted primarily to policy makers in the EU institutions and European national governments. The first two policy briefs have been published in September 2013, and demonstrate the high pertinence of BiodivERsA's work and the research it funds across Europe:

> “Wildlife diseases on the increase: a major threat for Europe’s biodiversity” based on the RACE project (<http://www.biodiversa.org/130>) lead by Dr. Matthew Fisher, Imperial College London, United Kingdom



> “Conservation of threatened insects in Europe: Managing habitats for land-use and climate change adaptation” based on the CLIMIT project (<http://www.biodiversa.org/124>) lead by Dr. Josef Settele, UFZ Centre for Environmental Research



These first two policy briefs were based on the results of projects funded under the first BiodivERsA call on “linking scientific advancement to policy and practice”. Building on the results of ongoing and new projects funded under subsequent joint calls such as the 2010-2011 call on “biodiversity and ecosystem services and their valuation” or the 2011-2012 call on “Biodiversity dynamics: developing scenarios, identifying tipping points and improving resilience”, other policy briefs are under development and will be published in 2014.

The series of policy briefs will be made available at <http://www.biodiversa.org/policybriefs>

Upcoming activities

Upcoming workshops and events:

- BiodivERsA General assembly meeting - February 2014 (Vienna, Austria)
- BiodivERsA meeting with potential new members February 2014 (Vienna, Austria)
- Strategic foresight workshop to identify emerging issues and stimulate scientific breakthroughs June 2014 (Brussels, Belgium)

Upcoming activities for the current joint call:

- FINAL SUBMISSION of proposals for the call 2013-2014 by 14 FEBRUARY 2014 at the latest
- Final meeting of the evaluation committee - end of May 2014
- Meeting for funding decisions – June 2014

Upcoming publications

- *Brochure on BiodivERsA 2012-2013 funded projects* through the call on invasive species and biological invasions. It will present the selection process used in the call, and the results of the call in term of funding amounts, success rate, main call themes addressed, main environments covered, and type of disciplines mobilized. Each project selected for funding will be presented.
- *Brochure on the type of biodiversity research funded in Europe.* The leaflet will analyse what kind of biodiversity research projects are funded in Europe, in particular the temporal evolution of the main themes of biodiversity research projects funded at national and European scale, and the complementarities and differences of biodiversity research funded between countries and national agencies.
- *Report on the ways to promote participation of new members in BiodivERsA.* More specifically, this report analyses which European funding agencies have potential to join the network with regard to their capacity to fund biodiversity research and to contribute to European and international projects.
- *Report on biodiversity research infrastructures in Europe.* This report presents a preliminary mapping of the existing biodiversity research infrastructures (RIs) in Europe. It also analyses the difficulties and opportunities to access these RIs.

BiodivERsA partners

FRB, France (Coordinator) - FWF, Austria - BelSPO, Belgium - BNSF, Bulgaria - ETAG, Estonia - ANR, France - MEDDE, France ONEMA (observer), France - DFG, Germany PT-DLR, Germany - VM, Hungary - RCL, Lithuania - NWO, The Netherlands - RCN, Norway - NCN (observer), Poland - FCT, Portugal - MINECO, Spain - FORMAS, Sweden - SEPA, Sweden - MFAL, Turkey - DEFRA, UK - JNCC, UK - NERC, UK.

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